"ACROPARAESTHESIA."

.....DOUGLAS C. GARDINER.....

ACROPARAESTHESIA.

A C R O P A R Æ E S T H E S I A.

The subject of this thesis - Acroparaesthesia - is one of a group of maladies known as Anquineurosis - Neurosis, because I suppose it seemed at first sight to be a nervous affection; but I believe no definite structural disease of the nervous system has been found; and anquineurosis because the symptoms are mainly, if not entirely vasomotor . The vasomotor indications of this disease are so pronounced that the name of vasomotor neurosis of the extremities has been given by Nothnagel to the complaint, and also "spastic vasomotor neurosis" to distinguish it from "paralytic vasomotor neurosis" of the extremities, otherwise known as Erythromelalgia.

The malady is now, however, known to the profession as Acroparaesthesia - Acro, meaning as we know an extremity, and paraesthesia, abnormal subjective sensations - the name indicates

Note. References on Page 51.

then the parts principally involved in the disease, and also the nature of the symptoms. It is a complaint that causes much suffering and great disability as well, both of which may to some extent be avoided by recognising the disease at its commencement, and by having a knowledge of its principal exciting causes; but, strange to say, it has not received so far the recognition it deserves, and medical men even yet, although the complaint has been known for the last twenty years, frequently overlook it. The disease is a fairly common one, and is almost entirely found among the poor - hard-working, middle-aged women being the chief sufferers. It does, however, occur in the better classes, but it is not anything like so common, and I have only met with one or two cases in this class during the last twelve months. I propose, therefore, considering the disease under the following heads : -

Historical.

The disease has received most attention in America and in Germany. Schulze was the first to propose the name of Acroparaesthesia for this complaint in the year 1890, but he was not the first by any means to write about these affections, although a knowledge of the disease was limited up to the time his works were published. It was really Nothnagel who first gave to us a complete picture of the disease and a detailed description of the symptoms. Jones, so far back as 1870, mentions the subject in "his studies on functional nervous disorders,"

and Putman five years after this reported similar cases. Ormerod discusses the condition also in the year 1883 in St. Bartholomew's reports, and Saundby had an article in the Lancet (1885 P. 42) on a special form of numbness of the extremities, and we are indebted to him for a very thorough description of the symptoms. Moir mentions similar cases about the same year, and also in the Lancet (P.595), and the following year Bernhardt drew attention to the disease in his country. Eight years elapse before we hear of it again, and then Laquer, ignorant of the work of others, wrote about the disease, and Collins (journal of nerve and mental diseases) mentions the subject also about the same year. The next time it is heard of, in this country at least, is a publication by Whiting in the medical press and Circular (April 10, 1907). He is the last, so far as I am aware, to draw attention to the disease within recent years, and the account he gives of it is a very excellent one indeed. The malady may also be found in some of the continental text-books (Evenhurst, Oppenheim), but it does not seem to be noticed in any of the standard works here.

C A S E S.

I. Kate P. - age 20 - unmarried

Occupation - Scullery maid.

History - (a) family -

Her mother died at age of 36, and was paralysed for five years before her death. The paralysis was limited at first to right side of face and arm, and at this time a child was born, and after its birth the paralysis affected her leg. Two other children were born, the mother dying in her last confinement.

(b) Personal and previous health -

Patient was a healthy girl and has never suffered from rheumatism, indigestion, anaemia or influenza; but at the age of seventeen she had an attack of gout - so the Dr told her - the right wrist swelling up suddenlyone night while patient was in bed. The pain was very severe and continued for a week - no other joints were affected at the time or since.

Present illness.

Began gradually at the age of twelve with a feeling of tingling and numbness in the right hand and fingers - the numbness was not so appreciable at this time if she rubbed the hand when it tingled, and she describes the sensation as if the hand and fingers were asleep. Subsequently, when the malady became more pronounced, the fingers felt during an attack as if they were dead.

Symptoms - I. sensation ; (a) subjective - During the attack patient experiences a distinct alteration in

the sense of feeling. She cannot feel a glass for instance when a paroxysm comes on, and tells me she cannot distinguish then between a smooth and rough surface, especially if the attack is a severe one.

(b) objective - There is no loss of sensitiveness to prick of a needle, or to the sense of being touched.

II. Vasomotor functions - the hands are markedly red, and patient informs me they become very blue in cold weather. The hands also feel moist and are abnormally hot to the feel. The patient notices this herself, and tells me they never feel cold, but during an attack the fingers have been observed to change colour somewhat, and become white.

III. Motor functions.- During a paroxysm she has not the same power in her hands or feet, and patient says she would be frightened to lift anything or hold anything in her hand then on account of sensation being temporarily impaired, and in consequence she has occasionally dropped things.

Distribution - It is confined to the right hand, including palm and fingers, unless the attack is severe, when the sensation passes up the arm. The tingling also occurs in right leg and occasionally in foot, and is very severe in the leg at times, and is accompanied here by acute pains. These pains are never so severe in hand

or arm. The symptoms of paraesthesia when they begin in leg start first in the sole of the foot, and as the tingling and numbness increase pain comes on as well, and the whole leg to thigh becomes implicated. Movement always aggravates these sensations, and when the lower extremity is attacked the patient has frequently to sit down. The left leg or foot or left hand or arm have not been affected, and patient thinks the symptoms as they occur in the leg would never get to the length of pain if she were able, with the same convenience, to rub the leg as she does the hand or arm.

Cause. Patient cannot suggest any reason for this trouble, but she is quite certain that during the winter the symptoms are more troublesome. She was so free from it in fact last summer that she thought the complaint had passed off altogether. Cold water always tends to bring on an attack and aggravate the condition ~~of it if~~ if it is present. Hot water does not. Patient menstruated for the first time at the age of 18, and she has observed frequently that the complaint is always worse then than at any other time, and sometimes it comes on only when she is "poorly."

Progress. It is distinctly remittent, sometimes better, sometimes worse; but it never became really severe until patient went out to earn her living, and to use as a kitchen maid a great deal of cold water. It was then she noticed the attacks

coming on with greater frequency and intensity. The complaint troubles her most during the day, sometimes in the morning but never at night. Rubbing always gives relief. The circulatory system is normal, and so are the superficial and deep reflexes.(Patella reflex).

II. Eva A. - age 25 - single, and of no occupation.

History - (a) family -

The father is a bank manager, and enjoys good health. The mother is alive and well. Two daughters died from Phthisis.

(b) Personal and previous health -

Patient suffered a good deal from anaemia some years ago, otherwise she has been quite well - never having rheumatism or influenza, nor has she suffered from indigestion so far as I know, and I have attended the family for the last 15 years. She is not a nervous or neurotic girl.

Present illness.

The onset was quite sudden, beginning about a fortnight ago (March 10, 1910) during the night with severe pain over radial side of wrist and shooting down to knuckles of index and middle finger. The pain rarely occurred in inner side of hand. The patient rubbed the parts without getting any relief, and was awake most of the night. In

the morning the pain was much easier, but it recurred in the night with even greater severity. The pain was most severe in the wrist, shooting up the arm sometimes, and frequently down into the fingers. She describes a paroxysm in this way - The hand, although it generally feels cold, suddenly became like ice, then acute pains come on, and this is followed by a feeling of burning and great heat in the hand. Tingling, as if the hand had been asleep, is felt sometimes, but not often.

Symptoms. (1) Sensation (a) Subjective - The sensation of feel is not interfered with in the palm of the hand at least, and patient tells me that this may be because the coldness is never felt here. (b) Objective is normal, the prick of a needle being felt at once. Sensation is not blunted. (2) Vasomotor - When a paroxysm comes on the hand becomes icy cold, it also becomes very blue and feels swollen, although it is not. The right hand looks more red than the left, and feels hot. (3) Motor - She can manipulate anything with the hand or fingers, but occasionally in the morning, when the pain has been severe through the night she has felt the hand "silly" and "shaky", and has dropped her spoon and once a cup at breakfast.

Distribution. Right hand and fingers - chiefly the dorsal aspect - the palm of the hand is never involved. It has occurred in the left arm but never the hand, and it has never been enything like so severe in the left arm as it has in the right hand. The feet and legs have escaped.

Cause. patient is a student at a fashion drawing school, and has used the brush, frequently in a cold room, for three to six hours daily for the last two years. The complaint is always worse in cold weather, and warm weather invariably brings a certain amount of relief.

Progress. As the trouble progressed the pain seemed to be felt most during the day, and not in the morning or at night, and the character of the pain seemed to alter, becoming more shooting and darting, but the sensation of coldness and numbness still remains. The circulatory system seems normal, and I cannot detect any difference in the radial pulsation of either hand. The knee jerks are brisk - the urine is normal, and so are the eyes.

III. Ellen H. - age 40 - married - one daughter.

History. (a) family -

Father alive - had appplexy and suffered from heart disease. Mother alive and strong. Sister

had paralysis on one side of body, and suffered also from "loss of speech," which came on after a disappointment, but she is now well. (b) Personal - Had a bad confinement, but has enjoyed good health, and never had rheumatism or influenza.

Present illness. Started three months ago, very gradually, with a feeling of numbness and tingling in right arm, chiefly the inner side of arm and generally at night. The pain then is very severe, and it keeps her awake for hours at a time.

Symptoms. - - (1) Sensation (a) subjective - The sense of feel is implicated to such an extent that she cannot pick up such things as a needle. At any time, even when the subjective symptoms of pins and needles, etc., are absent, she cannot pick up any small object such as a pin without using some pressure. Larger objects, like a bottle or a cup, can be handled without the same difficulty. (b) Objective - The prick of a needle is felt with difficulty on index and middle fingers on palmar aspect, and this is especially noticeable on last phalanx.

Vasomotor. The most marked feature is the sense of coldness in right hand and arm - the hand looks rather red and is never blue.

Motor muscular. Patient does not seem to think that she has the same strength in the hand that she used to have, and this is noticeable more in the morning after having a bad night; and as the sense of feeling is so much at fault she drops things.

Mental. She seems and looks a very nervous woman, and has

suffered from sick headache as well as functional aprasia.

Distribution. The sensation of tingling and deadness of the hand, and also the pain, is principally felt in palm of right hand and fingers. It never occurs on back of hand, but it sometimes passes up the arm. It has never been observed in the left arm or leg or in feet. The complaint is always worse during the night, and does not cause very much inconvenience in the day-time.

Cause. Cold water will bring on a paroxysm at once, and she avoids it for this reason. Cold water aggravates the condition if it is present, and hot water too has a tendency to start a paroxysm.

Progress. The patient's attention was first drawn to the disease about 15 months ago, when it was not anything like so severe as it is now. At first it occurred only at night, but she feels it now during the day also. Sometimes she is quite free ffom the malady. The heart and bloodvessels reveal nothing abnormal, and the reflexes are healthy.

IV. Jane P. - age 35 - married.

History - (a) family - Father died as the result of an accident, but suffered severely from gout for some years before his death. The rest of the family are well . One sister is at present confined in an inebriate home.

(b) Personal.- Has enjoyed good health until the present illness began, and has always been a temperate woman. She has never suffered from rheumatism or gout, but has had influenza severely before this complaint began. Suffered at time from neuralgia of head, and has felt inclined more than once to do away with herself. She has had no miscarriages.

Present illness. Began quite suddenly 5 or 6 years ago. It was first noticed in right arm, and then in left, and patient put it down to rheumatism. Both hands very soon became affected, but not the legs or feet. The first symptom noticed was numbness down both arms and then in hands, which swelled up, and this was accompanied by a good deal of pain and inability to use the hands on account of the stiffness.

Symptoms. (1) Sensation (a) subjective - The sense of touch is impaired, and in consequence of this and the stiffness patient does not seem to have the same power in hands. (b) objective - is normal.

Vasomotor. Hands never feel cold, but are always somewhat swollen, and feel tight. They do not look pale.

Motor - and muscular - Complains of such loss of power in hands that she cannot cut bread or even spread butter on the bread at breakfast time. This want of power is

felt more particularly in the morning, especially after having a bad night.

Distribution. Both arms and hands. The complaint is always worse at night, and has been the cause of her having many sleepless nights. The pain, as a rule, did not trouble her much during the day, but occasionally they would come on quite suddenly and cause her a lot of suffering. This was usually noticed if the weather was frosty or damp.

Cause. Patient seems to be of opinion that her occupation has a good deal to do with it. She goes out washing, and when this has been given up the trouble has not been distressing. She seems to be rather emphatic about that. Alcohol has always aggravated the pain, and increased the feeling of tightness in hands.

Progress. Sometimes better, sometimes worse. An improvement is generally noticed in the summer.

Reflexes. Superficial and deep quite normal, and the other systems are healthy.

V. This case is rather more interesting, as the condition of Acroparaesthesia followed a double ovariotomy, and briefly the history is thus : -

Mrs. L., aged 35, was operated on in September, 1909, for double cystic disease of the ovaries, and before the operation she was quite free from any symptom of

this complaint; but about six weeks after the operation she began to complain of subjective feelings in both forearms. She had pins and needles, a burning and a sensation of swelling and also of coldness in the forearms. Objective sensation was normal. The pains were very severe, and much worse at night, and often kept her awake for many hours. Both arms and frequently the hands were affected, but not the legs or feet; and she tells me there was sometimes a distinct want of power in both hands, and occasionally she would drop things. The patient had a comfortable home, and was not obliged to work. The symptoms persisted for several months, and I have just heard she has no trouble now, being quite free from all the unpleasant symptoms and also the pain.

VI. This case has a similar etiology, and is described by Sinkler (on a form of numbness of the upper extremities - Philad. Medical Times 1884). Both ovaries had been removed from a woman 41 years old. A numbness and pricking sensation with pains was felt in the elbow and right hand. After some days the left hand was also affected.

VII. Was published by Whiting (Medical Record, Jan. 2, 1909) - The woman was aged 32, and she began to suffer in this way a few months after having undergone hysterotomy at the hands of Dr. Arthur Giles. She complained

of pins and needles and numbness in the hands, also of a hot, bursting feeling, but especially of pain coming on in the middle of the night. She often had to get up for two or three hours at a time, when she obtained a little peace, and was able to sleep again for an hour or two. She was able to dress herself in the morning, but would often drop things. The pain was never so severe during the day.

VIII. Ellen P. - aged 65 - married.

History. Family - Had nine children - four are dead, one died in infancy from whooping cough, and another from"consumption of the bowels." The rest are alive and well. Never had any miscarriages.

Previous health. Patient has always enjoyed good health until the present illness began, and has always been a temperate woman.

Present illness. Set in suddenly about a year ago with severe pain in right arm,and shoulder, and for six months she suffered severely before seeking relief at the hospital. The pain was much worse at night, and at the beginning was limited to her arm and shoulder, but about three months ago the right hand, and more particularly the fingers, became affected, and the pain was so severe at night that sleep became impossible.

Symptoms. (a) Subjective - There is a feeling of stiffness

in all the fingers of both hands, and also a sensation of pins and needles, and as if a hot wire were being pushed through the hands, causing great suffering.

(b) Objective - You have marked hyperaesthesia on plantar aspects of tips of fingers, the hyperaesthesia also affecting the palms of the hands corresponding to the meto-carpal-phalangeal articulations, and here the least pressure causes painful impressions, and the prick of a needle seems to cause an unusual amount of suffering, ~~also~~ hyperalgesia.

Vasomotor. The hands get blue very easily. They also feel swollen, and look it slightly, but there is no Oedema, and the hand always feels dry and cold.

Muscular Motor. Patient tells meshe has not the same power in handsshe used to have, and attributes this to the stiffness in the hands, but also to the hyperaesthesia, and she does not handle anything breakable with the same confidence that she did at one time.

Distribution. For ten months the condition was confined to right arm and hand, and then she began to experience the pain in the left hand. The rest of the arm has escaped - never noticed it in feet or legs.

Cause. Cannot account for it in any way, but seems to think her trouble is in some way or another connected with cold. A cold day always gives rise to

the tingling in the hands, and sometimes the other symptoms too, and she tells me these symptoms may be brought on sometimes very quickly by dipping the hands in cold water. Hot water does not affect the complaint, nor does diet.

Progress. Is very remittent here, always worse during the winter. The knee jerk is quite brisk. There is no albumen in urine, which has a specific gravity of 1020, and does not contain sugar. The circulatory system is healthy, and the blood pressure is not abnormal. The pupil responds both to light and accommodation.

IX. Mrs. ward - age 49 - married.

History. Family - Has two children, who are both well. No miscarriages. Father killed, Mother died of old age. Has two brothers alive and well. Three sisters are dead - one died insane - another in a "fit," and the third at the change of life. Her "hysteric" mental condition for some years had caused a good deal of anxiety.

Personal. Patient has enjoyed fairly good health until this illness began. She has never had rheumatism, but has suffered greatly from depression and sleeplessness, and from what she called her "nerves." She has always been a temperate woman.

Present illness. Was observed for the first time about

seven years ago, and began gradually with a feeling of pain in left hand and shoulder, and the pain was always most troublesome when patient was warm in bed at night. She describes the pain as something like toothache, coming on in paroxysms which were sometimes very intense. Sitting up in bed seemed to give some relief, and in this position she would get snatches of sleep. In the morning the hands feel "cramped," and they have to be rubbed for some time before they are of any use. The pain is distinctly easier while the hand is hanging down by the side, and frequently during the night the patient would throw the arm over side of bed to get relief.

Symptoms. (I) Sensation - (A) Subjective are the only ones present, and have already been mentioned, i.e., pins and needles, tingling and numbness with pain. (b) Objective - The sense of touch and pressure are healthy, and she can feel the prick of a needle quite normally.

Vasomotor and trophic. Both hands feel cold, but there is no blueness, if anything they look rather palep especially the left hand. The right hand is slightly swollen.

Distribution. It was limited at first to left hand and shoulder, and for a time under treatment she was much better; but lately the pain seems to have affected both hands and right leg, but has never affected feet. Knee

jerk active. Urinary system healthy. Pupil normal.

X. Phoebe H. - aged 68 - widow - occupation mantlemaker.

History. Family - Mother died of cancer. Father of "abscess of groin." No other relations.

Personal. Suffered severely from neuralgia at age of 13, and it continued till she was 29. Her teeth were all removed without relieving the pain. She has never had rheumatism or gout, and has always been a temperate woman, and never had any miscarriages. She considers herself a very nervous woman, and is easily frightened.

Present illness. Began quite suddenly - about three years ago - during the night with severe pain in both hands. The pain was always severe while patient was recumbent, and in consequence she could not lie down in bed at night. Want of sleep and the pain made her feel so ill that she consulted a medical man, who informed her she was suffering from "what painters are struck with, and advised her to go to the hospital. She sought relief at the London Hospital, where she was told they did not understand her complaint, and deriving no benefit she obtained advice at the Prince of Wales' Hospital, and gradually improved under treatment.

Symptoms. (1) Sensation (a) Subjective - Are very troublesome - she has also a feeling of tightness round the

wrist, and in consequence of the numbness she has not had, up till the last months, much feeling in her hands.

(b) Objective - She can feel the prick of a needle, and also touch quite right.

(2) Vasomotor. Her hands are swollen and red, and always feel cold. The skin over hands looks shiny, and patient says they become pale during a paroxysm.

Muscular and Motor. Patient says she can pull anything or lift a weight, but she cannot push with hands.

Distribution. Chiefly the hands, but the symptoms of paraesthesia have occurred in legs from knee to ankle, and she has required to hang the legs out of bed, at night, to get relief.

Progress. The symptoms remained for about a year, and the first improvement noticed was the disappearance of the feeling of tightness round the wrists, and then the pain got easier, but up to the present she still suffers a good deal, and always has the sensation of pins and needles in the hands and fingers, and a feeling of soreness and stiffness in both hands.

Cause. Patient thinks her occupation as a mantle-maker has a good deal to do with it. Reflex healthy, other systems normal.

XI. Ellen B. - aged 50 - married.

History. Family - Had 8 children and 4 miscarriages - two

of the children are dead - one died of "convulsions," the other of pneumonia. Mother died of cancer at the age of 78.

Personal. Had Bright's disease some years ago, but the urine is now free from albumen, and the Sp. G. is normal. She never suffered from rheumatism or gout, but she is frequently depressed, and she is sometimes so nervous that she is frightened to go up the street.

Present illness. Was first noticed about 6 years ago in right hand, the symptoms coming on gradually, and first appearing in wrist and fingers. Numbness was the first abnormal sensation felt, and then a tingling feeling over the whole hand, followed by pain, and this as usual was worse at night, and the only way patient could obtain relief and get a few hours' sleep was by allowing the hand and arm to hang over the side of bed.

Symptoms. (1) Sensation - (a) Subjective - These are of the usual kind, i.e., pins and needles as if the fingers and hands had fallen asleep, and at times there is also a feeling of numbness. (b) Objective - The sense of touch is impaired (Hypaesthesia) in fingers, thumb and wrist, and she does not feel the prick of a needle as in health. The palm of the hand is more sensitive to touch and also pain. Sensation is so blunted that she cannot pick a needle or knife up from table, and

when the eyes are closed she cannot distinguish by the sense of touch any article she might lift from the table.

Vasomotor. Hands swell slightly, but do not change colour, and always feel moist but not cold. The complaint troubles her most during the summer.

Muscular and Motor. Has very little strength in fingers or arm, and she has some difficulty in carrying anything in hand because of the numbness and Hypaesthesia in fingers and wrist.

Distribution. Most marked in right hand, and to a less extent in same arm and shoulder. The feet and legs have not been affected, nor the left hand or arm.

Cause. The patient has a comfortable home, and has not used her hands very much, and does not require to do any washing. The complaint is not worse in cold weather, or when the hands are placed in cold water. The woman is of a very nervous temperament. The other systems are normal.

XII. Susan O. - age 50 - Married - No family - No relatives.

Personal history. Had good health up to the time hands got bad. Never had Rheumatism, Gout or Influenza, and has always been a temperate woman. Had a good deal of worry, but does not consider herself a nervous woman.

Present illness. Began gradually three years ago with a feeling of numbness in fingers of both hands, and also

a sensation of pins and needles, and after some months she suffered severely from pain, which started in fingers, and extended up the arms.

Symptoms. (1) Sensation (a) Subjective - The numbness and prickling sensation is felt in fingers and arm but not in palm of hand. There is also pain and the fingers feel dead. (b) Objective - Could always feel the prick of a needle and the sense of touch is not impaired.

Vasomotor. Hands do not feel cold and are not blue, but feel swollen although they have not that appearance.

Muscular Motor. Could not lift a needle or pin from table when the numbness comes on, and could not hold anything breakable then with much confidence.

Distribution. Both hands - never in feet, but has felt the sensation to a slight extent in calves and thighs.

Cause. Patient works hard at washing, and the pain is always felt more acutely when the hands have been much in water.

XIII. This case and the following one has been reported by Cassirer of Berlin, and is worth recording as the exciting cause in each case was a wound. A woman had caught her left hand and fingers in a machine, and as a result of this the last phalanges were considerably crooked. From this time arose unpleasant sensations in the hand - painfulness in the tops of the 2-4 fingers

and a numbness in the morning and night. The complaint increased in severity to such an extent that she could not thread a needle nor dress herself. The fingers at such times became pale. No objective symptoms were present, and she was not a neurotic woman.

XIV. Here the cause was the same, and the age of the patient was 23. She had a fracture of the forearm, and sometime afterwards a feeling of coldness was experienced over the left hand, and some months after this the other symptoms of acroparaesthesia developed; but during this time she had been much occupied at washing (see Cassiver - Vasomotorisen trophischen neurosen - P. 107).

XV. Mrs. R. - age 56 - married.

History. (a) Family - Had two premature births - one lived for ten months, and died of "consumption of bowels and water on brain." Two brothers were subject to fits - one died at age of 28 - the other at 36 , and both died during a fit. Another brother is alive, and has also been subject to fits, but has now got over them. (b) Personal - Has been troubled with Bronchitis, had Rheumatism, but not gout. Marked history of alcohol - menapause at 50.

Present illness. Began 6 months ago with numbness and a tingling in the hand, which sometimes felt quite useless.

These sensations come on mostly at night while patient is in bed, and is always worse after ironing, and she has had a good deal of this to do lately. These subjective sensations are very troublesome, but it is only now and again that she has pain. There are no objective sensory sensations.

Vasomotor. Are more marked than the sensory. The hands are sometimes swollen, and feel cold, becoming like ice, and during an attack she has noticed them become very white, chalk white even. There is a subjective derangement of the sense of touch, but she can feel the prick of a needle at any time, and there is no hypaesthesia. The hands also become blue at times.

Distribution. Both hands - not feet or legs.

Cause. She has done a great deal of ironing and washing. The knee jerk is normal. The pupils respond to light and accommodation. There is no atrophy, and the electrical reactions are normal. The urine does not contain either albumen or sugar.

XVI. The patient is a man. C.S. - age 57 - occupation - traveller.

History. Never had Rheumatic fever or Gout. Had stone in kidney.

Present illness. Began gradually about 7 years ago, with tingling and numbness in both hands, and a feeling of

deadness in the fingers. Sometimes he has a good deal of pain in them as well, especially in mornings after washing. Sensation is very much blunted, (hypaesthesia), and he cannot feel the prick of a needle (analgesia) on the dorsal and palmar aspects of the index, middle and ring fingers. When a parozysm comes on the nails and last phalanges of the fingers become markedly blue, and the fingers frequently also go chalk white at this time.

Distribution. Both hands equally.

Cause. The patient is a naturalised German.

Muscular Motor. Great want of power in the hand, especially during a paroxysm.

Progress. Comes and goes, - is always better in summer, and cold water always makes it worse. Circulatory system, heart and bloodvessels reveal nothing abnormal. Urine healthy. Knee jerk normal. Pupil normal. Electrical reaction normal.

E T I O L O G Y.

Sex. Women seem to suffer in overwhelming numbers from this disease, and during the last year I have only had the opportunity of meeting with it in one man. Frankl - Huchwart (Akroparaesthesia - Nothnagel Spec. Patholog. und Therapic. 1898 X12) came across it only in 12 men out of 162 cases.

Age. It is usually found about the middle period of life. This is the experience of other men and also my own. I have met with it in one case (case I) at the age of 12, and Frank Hochwart[1] also met with it at the same age. My oldest patient was 65, but cases have been reported over 70 .

The following statistics are given by F. Hochwart : -

	Under 20 . .	2
Between	20 - 30	13
	30 - 40	39
	40 - 50	38
	50 - 60	29
	60 - 70	7
	70 - 80	1

So the disease is most frequent between the ages of 30 - 50.

Occupation. The complaint is undoubtedly most prevalent among the working classes, and chiefly among those who have to use their hands a great deal. The work that determines and aggravates the complaint is an occupa-

Water tion involving the use of much water, and this may be seen to a marked degree in most of my cases, and particularly so in case 3 and 8, where the paroxysm occurred at once (case 3) when the hands were brought

Cold water. in contact with cold water; and cold weather also seemed to influence the condition in an unfavourable way.

Hot water.

Sometimes hot water also makes the complaint worse, as in case 3 - Cassiver (vasomotor -trophischen neurosen P.104) also makes a note of this fact, and mentions that 16 of his patients were exposed to callings requiring the use of cold water; and a strikingly large number of these were the wives of coachmen who were much exposed to wet and cold in washing the carriages, although none of their husbands seemed to suffer from the disease. Oppenheim once saw the complaint suddenly arise when a patient of his in summer time brought his hands in contact with ice, and I have tried the same experiment myself on one or two occasions; but I have never been able when the symptoms were not already present to set up a paroxysm in this way; but extreme cold, such as a lump of snow held in the hand always intensified the symptoms very much. Overstraining of the hands was adduced as a cause by a large number of Cassirer's patients, such as sewing, milking, ironing, mantle-making, and Case XV. is an illustration. of the latter cause giving rise to this malady. Overstraining from another cause may be seen in Case II. I have never got a history of rheumatism to such an extent.that one might consider it as a casual element, in any of my cases, and I have never been successful in associating influenza with the malady.

Rheumatism.

Influenza.

Indigestion. Saundby found indigestion frequently accompanied the disorder, but it has not been my experience; and I have made a point of ascertaining particularly if any of these cases I have described suffered from a disordered digestion, but I have never been able to elicit a history of this among any of the patients. Schmidt (reference see last page) has published many cases in which tuberculosis of the lungs was of casual importance, but I have only one case (Case II.) where a family history of this could be obtained. Most of my patients suffering from this malady were of a temperate habit, ex-

Alcohol cepting one case (XV) who admitted taking alcohol to excess frequently, but tells me the alcohol always had a soothing effect on the tingling; while in another case (III.) the patient rarely touched alcohol in any form, and whenever she did the symptoms of this complaint were always aggravated. Cassiver mentions three cases where alcohol had been used freely. Friedman and Laquer

Weakness of the heart. both found associated with this malady some weakness of the heart, but I did not find this in any of my cases, and the bloodvessels in both radial arteries was the

Injury. same and normal. As regards injury, I have not met with a case where this has been the exciting or predisposing cause, but two cases from this cause have been published by Cassiver, of which I have given the details.

Neurotic diathesis.

A neurotic diathesis is reckoned by some to be important casually, and I have referred to this more particularly in mentioning the theories of its pathology.

In concluding the discussion of the etiological factors which seem to determine the onset of this complaint, one must not lose sight of the great frequency with which it occurs in women, and because of this it is necessary to consider if a relationship exists between the complaint and a certain period of their lives when ~~serious~~ nervous changes are so prone to occur, and also if there is a connection between the disease and the sexual functions. Saundby denies this in his published observations (1885) in numbness of the extremities occurring at the climacteric. Three of my patients (~~VI~~ X., VIII., XV.) were well over this period of life before any symptoms of the disease manifested themselves. Two others (XI., XII.) noticed the complaint first 3 and 6 years respectively before menstruation ceased; while my first patient (Case I.) complained of the disease 6 years before menstruation was established; and yet she is the only patient I had who suffered most from the complaint when she was poorly, and frequently only noticed it then. Cases II., III., IV., and V., did not observe any difference at this time. Among Cassiver's patients four developed the disease some considerable time after the ~~monofause~~ menopause, and it occurred in 7 cases out of 19 just at

Menopause.

the same time. In his cases also it arose once during the puerperium, twice a short time after a miscarriage, and twice during pregnancy. With reference to sexual examples only four of Cassiver's patients out of eighteen were normal in this way, and my own case (V.) and the two following published cases indicate the intimate connection which exists between this disease and the reproductive functions; and the following case, recorded by Whiting (Medical Record, Jan. 2, 1909) conclusively demonstrates this also.

A woman aged 32 began to suffer 2–3 months after having undergone Hysterectomy at the hands of Dr. Arthur Giles. She complained of pins and needles and numbness in the hands, also of a hot burning feeling, but especially of pain coming on in the middle of the night. She often had to get up for two or three hours at a time, when she obtained a little peace, and was able to sleep again for an hour or two. She was able to dress herself in the morning, but would often drop things. The sensations usually disappeared about 15 minutes after getting up, but might return during the day, though never so severely.

SYMPTOMS.

As Nothnagel was the first to give a detailed

account of the disease, I propose under this head to give his picture of the complaint, and then analyse and compare his symptoms of the malady with those I have described in my cases. According to Nothnagel the disease begins gradually, seldom suddenly. They were above all cases of Paraesthesia - there was a feeling of numbness and deadness, as if the fingers were wanting - at other times again as if the fingers had fallen asleep.- a tickling sensation, to which we must add frequent acute pains. There never was wanting a feeling of coldness. The disorder attacks the fingers, hands and lower arms, the palms of the hands being seldom so violently attacked. A further symptom is a subjective derangement of the sense of touch. The patient cannot recognise whether a surface is rough or smooth. Objectively, there is loss of the sensitiveness to prick of a needle, to sense of being touched, and to electrical stimuli. The disturbances are for the most part noticeable on both sides of the body. Motility is not impaired, but the patient complains that finer operations are much more difficult to perform, owing to the feeling of stiffness in the fingers. For the most part the fingers are pale, quite white or chalk white. The hands feel themselves colder than normal, and where there has been an unequal distribution of the alteration of colour in the two hands there was not found any difference in the radial pulsations or any

difference in the radial pulse of the same hand during or after an attack. The complaint is worse in the morning, and on exposure to cold. Tapping, brushing, and warm water bring relief.

I shall now ascertain how far these symptoms of Nothnagel agree or differ from the ones I have recorded in my cases, as regards : -

Onset. Of the 16 cases I have described only three started suddenly, so that the majority of patients evidently find the disease beginning in a gradual way.

Distribution. Three of my cases developed symptoms of the disease in both hands, and in five others the arms were affected as well. In four the symptoms were present in the legs also, and one patient only found the feet involved. In ~~five~~ 3 cases only was the disease limited to one side of the body. The complaint thus seems to occur most frequently on both sides of the body, but it is found in a fair number of cases only on one side; and Nothnagel does not seem to mention this unilateral distribution. The feet are rarely affected, and in all my patients it only was found in one. It has been noticed also in the lips I believe, but I have never met with a case. The fingers rarely escape the disease, but the palm of the hand is not always affected (Cases II., XII.), and in these two cases the palm escaped altogether. The back of the hand seems to bear

the weight of the malady, but, as in Case III., it may escape.

Time of Paroxysms. Nothnagel says the complaint is worse in the morning, but in the majority of my cases the malady was worse at night, interfering with sleep, and giving rise to great suffering; in one case (Case I.) the complaint was most troublesome during the day; in another it was equally troublesome at night, and during the day (Case II.); and in two cases the disease was most pronounced during the night and in the morning.

Sensation. (a) Subjective. The greatest number of my cases first complained of numbness or tingling, and in only three patients has pain been the first symptom observed; and it is interesting to note that these were the cases to begin suddenly. With the tingling and numbness you have also in some of my cases a feeling of pins and needles, of deadness, and a burning in the hand. A few of my cases have also complained of a feeling of tightness, stiffness, and swelling in the hand, and in one patient (8) a sensation is described as if a hot wire were being pushed through the hands. None of my cases have noticed, however, the feeling of formication. My second Case (E.A.), who is a very intelligent girl, gives her symptoms in the following order : -

The hands, she explains, first of all feels icy cold; this is followed rapidly by acute pains, and then she notices a feeling of burning and great heat in the hand. Tingling sets in now, and the hands feel as if they were

asleep, but the sensations are frequently arrested when the hand feels hot, and she does not always have the tingling feelings.

(b) Objective. Subjective sensory symptoms are always present in this disease, and it has been so in all my cases; but objective sensations may also be found, and in a few of my cases this may be observed. In one case (III.) sensation is blunted (hypaesthesia), and the prick of a needle is felt with difficulty; while in another (8) you have marked hyperaesthesia in plantar aspects of tips of fingers, and in this case, in addition to the hyperaesthesia, you have hyperalgesia as well. A third patient (Case XI.) complains of sensation very blunted also (hypaesthesia), and the last patient(XVI.) suffers not only from a blunting in sensation (Hypaesthesia) but also from analgesia, and he cannot feel the prick of a needle in the dorsal and palmar aspects of the index, middle, and ring fingers.

The objective manifestations, however, are not as a rule well marked, and according to Frank-Hochwart Hyperaesthesia and hyperalgesia are seldom found. Paraesthesia, then, is the most prominent sensory symptom, and according to Friedmann they are chiefly to be found in the region of the ulnar nerve; but in only one of my cases (II.) was I able to elicit any definite localisation of the symptom, and in that case the pain nearly always occurred over the radial side

of wrist, and shot down to index middle finger, the pain rarely occurring on the ulnar side at all.

Vasomotor. Eight of my patients complained of cold hands, and in one case (II.) the hand was icy cold when a paroxysm came on. Two other cases I have recorded (XIV., XV.) did not suffer from cold hands at all, and the first case I describe always found the hands very hot. The symptom of coldness then may not always be present, as Nothnagel maintains. He also says the fingers are usually pale, quite white or chalk white; and in two of my cases (XV., XVI.) this was very pronounced; and in four others the fingers looked rather pale, but not white. Many of my patients complained of the hand or fingers being blue, and this was very noticeable in my last case (XVI.) The hand occasionally feels dry - in other cases moist. The vasomotor symptoms may be more marked than the sensory, and one case (XV) is an illustration of this, where the hand looks swollen and red, and she does not complain so much of pain.

Muscular Motor. Muscular motor I have not noticed any crippling nor atrophy of the muscles. The electrical changes have always been normal, and also the reflex - superficial and deep (patella). There is, however, a certain amount of want of power in the hands and fingers of some of these patients, I suppose in consequence of the subjective, and at times objective sensory disturbance. In one of my patients (Case II.) the hand felt, especially in the morning, after a bad night,

quite, as he describes it, silly and useless, and again you have patients complaining that finer operations, such as lifting a needle, was done with difficulty, and that they would not attempt to lift anything breakable while a paroxysm was present - they had not the confidence then - owing to the want of feel in the hand to lift or support any weight. In some cases, I believe, these patients have great difficulty with their toilet, especially in the morning.

Heart and Bloodvessels.

These indicated no abnormality in any of my cases. The radial pulse did not show an increased blood pressure, nor was there any difference in the tension of the two radial arteries, and I was particular to ascertain this in the older patients.

COURSE OF THE COMPLAINT.

As we have seen, in the greater number of cases, it comes on gradually. Not much notice seems to be taken of it at first, but as time goes on the symptoms become more troublesome, and in consequence of the pain and the sleepless nights the patient sooner or later seeks advice. Occasionally the disease sets in suddenly (Cases II., VIII.), and may run a fairly acute course, terminating in a few months. This acute beginning and course is, however, quite

the exception,; the majority of my cases, and also the published ones, have been chronic and intermittent, and in none of my patients has it been continuous. Friedmann gives an account of one that was acute from the commencement, and terminated in recovery within a week. The patient was a man who hitherto had enjoyed good health, He was engaged in an oil factory, where he was occupied with cold and hot fluids, when he suddenly had a feeling as if both hands were swoolen, and as if they had become stiff and inflexible. On letting his hands hang down they ached and burned, and felt as if they had fallen asleep. This feeling was particularly noticeable in the three fingers towards the thumb of the right hand, and in all the fingers of the left hand. Sensibility for warmth was diminished.

As the complaint is so much influenced by cold and especially cold water, the course of the malady may be shortened a good deal if the patients alter their ways. In one case (I) the complaint did not trouble her so much when she gave up using cold water; and if the disease has been set up by overstraining of the hand (Case II.) an improvement is soon observed if the patient ceases to employ the hands in this particular way.

DIAGNOSIS.

No difficulty ought to arise in the diagnosis of this disorder. Its chronic intermittent course is immediately suggestive of the complaint, and when any doubt does take place in recognising the disease it is usually some form of neuritis that seems to be the obstacle to a correct interpretation of the symptoms. Other conditions, however, might have to be considered, and the professional neurosis, of which Writers' Cramp forms the large majority, is one of them. Here you have symptoms that might cause some confusion - for instance, you have the gradual onset, and although the first symptom usually noticed in Writers' Cramp is pain, yet sometimes pain is the initial symptom. And other changes, such as tingling or formication may occur as well. But in this neurosis you have an incapacity to perform some particular action, and the history of cramps being excited immediately the attempt is made would put one on the right track; besides in the professional neurosis you do not have the same paroxysms of pain occurring during the night and in the early morning; and Frankl.-Hochwart says the paraesthesia is confined to one side in Writers' Cramp, and it is bi-lateral in Acroparaesthesia - but we have seen the paraesthesia may be unilateral also in the latter disease. However, in

Writers' Cramp.

Writers' Cramp you would not have the vasomotor changes which are so ~~prevalent~~ prominent a symptom in many cases of Acroparaesthesia. In the differential diagnosis we might also have to think of neuralgia, where the pain is generally intermittent; but the severe, violent pain, the limitation to one nerve region as well as the ~~tenderness~~ tenderness at certain points would quickly help us to a correct diagnosis.

Neuralgia.

We have also another painful malady which might have to be considered, i.e., Neuritis, but in this affection (Neuritis) the distribution is quite different. Single nerves are usually attacked here, and not the principal ends of several nerves, as we find in Acroparaesthesia. The two diseases may be confused, however, as we have seen in one of my cases (X) where the patient was told by a medical man that she was suffering from "the complaint painters are struck with." I have also met with on or two cases of Rheumatoid arthritis, complicated with some slight neuritis where difficulty arises; but the presence of atrophy, and the diminution or loss of the faradic excitability soon put matters right. No real difficulty ought to be found in distinguishing the two diseases, when we remember the loss of the knee jerk, the atrophy, ~~of~~ the electrical changes which are always present in Neuritis, and absent in Acroparaesthesia; and the presence of sugar in the urine if the neuritis is of

Neuritis.

Rheumatoid Arthritis.

a diabetic nature.

Similarly Locomotor ataxia has to be taken thought of at the beginning; but the pupil and other symptoms and signs would soon clear up any doubt, and Whiting mentions that threatened cerebral thrombosis, where the symptoms are one-sided, might also have to be borne in mind in the differential diagnosis.

PROGNOSIS.

Acroparaesthesia, although it gives rise to so much distress and pain, never of course involves risk of life to the patient; but its course, as we have already seen, is a chronic, intermittent one; and these patients may go sometimes for a considerable time without any manifestations of the disease. The progress is supposed to be better if the malady starts acutely, and in one of my cases (II) this was certainly so. She suffered considerably for two or three months, followed by occasional paroxysms, but this winter she has been almost entirely free from the complaint. In my experience the progress depends a good deal on the cause and if this can be avoided.

CLASSIFICATION OF THE DISEASE.

This has been attempted in two different ways. One (Friedmann) considers the etiology only, while others

(Haskovec) leans more to the symptomology and divides it into three forms.

1. Paraesthesia without vasomotor symptoms.

2. Primary Paraesthesia with secondary vasomotor and trophic changes.

3. Secondary Paraesthesia, with primary vasomotor changes.

This division distinguishes the pure Acro-paraesthesia from the condition where you have vasomotor and trophic changes as well, and you may have in both forms an objective alteration of sensation or actual pain which may be very severe or entirely absent. One of my cases (XV) suffered more from the vasomotor symptoms than she did from the sensory; and Rosenbach records a case which illustrates the predominance of the vasomotor and trophic symptoms over the sensory ones very well. The patient, a woman, aged 62, suffered at the climacteric from giddiness. For some months to this she complained of a feeling as if the hands had fallen asleep, and that finer manipulation could not be performed. Later on swellings occurred over the right wrist, and once a herpetic eruption which disappeared of itself. Considerable oedema occurred over the wrist, and the skin over the fingers also was oedematious. In addition there was present formication and tingling in the right hand.

Objective sensations were quite normal.

PATHOLOGY.

So far as this subject has been pursued very little light has been thrown upon the pathology of the disease; and up to the present time this is more or less conjecture. However, opinions and views have been expressed to explain the symptoms of the disease, and they are very interesting, although numerous, and like all theories differ very much. The first one to be considered is that suggested by Rosenbach, who looks on the disease as a nervous one, and in

I. Nervous.

support of its nervous origin draws attention to the marked symmetry of the complaint. The fact of the thumb never being involved, and that the sensory nerves of the forearm are always implicated, and that branches of the ulnar nerve to the back of the hand never escape. If this is proof of its nervous origin the majority of my cases supports this theory; but the back of the hand is not always involved in the complaint, as a reference to one of my patients will show (Case III.) ; so exceptions occur to this rule, and the back of the hand is not always affected. neither does the thumb always escape Case II

Pfeiffer looks on the disease as of a gouty

II. Gout.

nature, and in confirmation of this he describes swellings which are usually found in the last interphalangeal joints of these patients. The swellings he identifies as Heberden's

nodules, and speaks of gout fungus (Eichtfinger) in describing the disease. He maintains that these swellings are exclusively of a gouty nature, and these limitations to the end phalanges as a peculiar and characteristic symptom, and which must be looked on as analagous to the gouty affections of the joints of the great toe; and he points out as a further argument that in ~~curinic~~ Chronic articular Rheumatism the terminal phalanges are the ones that remain free. It is not necessary, he also says, for an acute gouty attack to precede the onset of this disorder, but that heredity plays a very important part in giving rise to the disease. Charcot does not uphold this theory at all, and has never found any uric acid salts in the supposed gouty nodules of Pfeiffer. Certainly none of my patients showed any indication of gout. My first case gave a history of it, but considering the sex and the age, I think some mistake must have been made. In another case the patient's father (IV) suffered severely from gout, but she did not have any indications of it, unless the subject of this thesis was one of them, and this patient, if heredity plays such an important causal part, was an excellent subject to acquire the disease.

III. Arterial Cramp.

Nothnagel assumes that some arterial cramp is the origin of the complaint, and in support of this hypothesis draws attention to the pallor of the skin. This

does not explain, however, the other symptoms (paraesthesia) unless we are to understand that the peripheral nerves are damaged, through want of nourishment, at the time the spasm of the arteries takes place; but one must bear in mind that the clinical representation of the disease does not always show this. Again, Schulze, thinks, and with some reason, that the vascular narrowing is only a co-ordinated part-phenomenon of the other nervous symptoms; and that some general cause, of which we know nothing, alters both the vascular narrowing apparatus and the sensory nerves. Nothnagel's assumption that spasms of the arterial bloodvessels occur must not , however, be forgotten, because we can have without any sensory change whatever, a deadness of single or several fingers; and Haskovic mentions a case where the deadness immediately arose when the hand was dipped in cold water; and I must say this has been noticed by one of my patients (XVI.) also, who at times found, while washing in the morning, one or two of the fingers quite numbed, and without experiencing any sensory developments at all.

IV. Neurotic.

Frankl.Hochwart will not admit this, neither does Schulze, and Bernhardt says "to dismiss the matter under consideration simply as hysterical will not do." Now I must say, in taking the cases I have recorded in these pages, I was particularly struck with the frequency

and the prominence of the nervous ~~hysteria~~ symptoms I was able to elicit either in the patient herself or her family; and in only one case (VIII.) was no nervous history obtainable. (I except the last case). Certainly many of these women had reached the age when nervous symptoms of some kind might be expected to develop; but if we look at Case XV., where the patient herself was a slave to alcohol, and two brothers died of epilepsy, and another had just got over it, we are tempted to think that some nervous change may after all be the predisposing cause at least of the disorder; and when we read Case III., where a sister had paralysis, and the patient herself suffered from functional aphasia, and consider again Case IX., where one sister died insane, another died in a fit, and a third sister was mentally afflicted, one seems inclined to attach some importance to this neurotic theory. It would be strange indeed with histories like that if some form of nervous development did not arise in the other members of the family. Within the last few weeks I have been able to ascertain that case H., shortly before the onset of the complaint, had broken off an "engagement," and her Mother who told me the incident seemed to think that this was the cause of her daughter's trouble, and it may be so; but we must not lose sight of the fact that this girl had been using her hand for many hours at a stretch in a cold room without a fire.- the very causes we so frequently find at the back of this

disease. And although in the cases (XV., III., IX.) I have quoted the nervous element is very suggestive, yet the recognised exciting causes of the disease were still available to account for the malady. In considering Nothnagel's theory of arterial cramp I referred to a case of Haskovic's, where one or two fingers went dead immediately they were dipped in cold water. This is a condition , as we know, that is occasionally met with in neurotic people, but in my own case (XVI.) where this phenomenon occurred the patient was certainly quite free from any neurotic tendency; and besides the fingers were frequently very blue as well, and I have never heard of hysteria or neurasthenia causing that.

V. Occupation

Whiting considers it an occupation neurosis, and I daresay he is right.

The weight of evidence then all seems to point to a vasomotor spasm - the sympathetic system being in a condition of great instability - and along with this you have some stimulation of the sensory nerve endings, caused may be by some toxaemia or auto-intoxication arising from such diseases as anaemia, rheumatism, gout or alcohol - or from some other source of which we know nothing.

TREATMENT.

Just as a man showing symptoms of lead poisoning

would be advised to take up some other way of earning his living, so in Acroparaesthesia the ~~great~~ first suggestion to make, in ~~meeting~~ treating these cases, is to get the patient to find some other occupation. All over-exertion of the hands, such as ironing, sewing, and washing must be given up, but the patients who suffer most as we have seen from this complaint are seldom in the fortunate position of being able to follow such advice; and this in many instances accounts, I daresay, for its chronic and intermittent course. Sometimes, however, in spite of the fact that the patients carry on their work still, the paraesthesia may vanish under suitable treatment, and Cassirer mentions the case of a milk-maid where this happy result took place. This, however, is quite the exception, and in my own experience, which has not, however, been very great, I have always found a steady and sometimes marked improvement when the patient avoided the exciting cause. And this was particularly noticeable in my second case - she came to me the morning after having her first bad night, and rapidly improved, although she continued to do a little work at times, after the acute symptoms had passed off. She has occasional paroxysms still, but never uses cold water, and always works in a warm room. I did not find drugs in her case of much use. Salicylates, asperin, and phenacetin were all tried, but she seemed to think they made her worse; but

rubbing in any form always helped her to pass a better night, and she does this regularly now morning and evening, and at present I am giving her some iron. Most of my other cases, who were unable to give up work, found their way to a Hospital after I had unsuccessfully tried

Medicinal agents.

the effect of ~~aperient~~ different medicinal agents, such as arsenic, phosphorous, and strychnine. One would expect arsenic, which has been proved to influence the nutrition of the peripheral nerves, and phosphorous, which has so many points of similarity, to have a beneficent result, but I did not find it so. Bromide certainly helped, and they always felt better after taking it, especially in the middle-aged women, and in them it relieved the symptoms if it did not improve the condition of the hands.

Digitalis and quinine have been tried by men more experienced than myself, but I believe the result has not been very satisfactory. Saundby was very successful in the treatment of his cases, and attributed it to the free use of rhubarb and calomel, and where the gastric and intestinal functions are at fault improvement would naturally be expected from the use of such drugs.

Electricity.

This seems to give the best results, but I have not had the opportunity of using it in treating any of my cases. The best form of electricity to adopt is the electric (Faradic) brush, or electric band bath; and I believe

comsiderable relief, for a time at least, may be obtained in this way, and continental observers say that these patients constantly return to ask for this treatment. It is not, however, always successful, and sometimes aggravates instead of improving the condition. Other methbd of electrical treatment, such as galvanisation of the spine, have been tried, and Frankl.-Hochwart has suggested massage and Friedmann Swedish gymnastics.

Hydropathic. This treatment has been resorted to also, sometimes cold, sometimes hot, local and general, and also alternate douches have been tried, and even salt water ablutions which I believe gave the best results; but I have had no experience of this kind of treatment at all.

In conclusion I would just say that I always found

Friction. friction with liniments very helpful, and the avoidance if possible of all the causes of the disease , the first and most important step in modifying and arresting the further progress of this painful malady.

Before writing "finis" to this interesting subject, I would to briefly recapitulate some of the important points. I have been able to corroborate.

Sex. Women are involved in overwhelming numbers, but the disease may be met with in men. It is found chiefly in the

Age. middle period of life - 30-50 - and it is met with chiefly among the poor.

Cause. Any over-exertion of the hands, such as ironing, washing, mantle-making, etc.

Cold seems to aggravate and predispose to the complaint , especially cold water. Hot water usually gives relief, but occasionally aggravates it also.

Other causes have been advanced, such as anaemia, rheumatism, gout, influenza, and it may arise from a disordered digestion and sexual abnormalities.

Symptoms. Subjective sensory symptoms are always present.

Sensation. Objective occasionally. Vasomotor symptoms are usually pronounced.

Motor and Muscular Are not affected. Never any atrophy, reflexes always normal. Electrical reactions healthy.

Distribution. Hands and fingers mostly - rarely feet. Said always to be bi-lateral, but in a few cases of mine it was uni-lateral. Back of hands said to be always involved. This was not so in one of my cases. The thumb always escapes.

Course. Chronic and intermittent. May be acute. Usually begins gradually, but a few of my cases started suddenly.

Diagnosis. Sometimes taken for neuritis.

Prognosis. Never gives rise to other conditions, no matter how long it may last.

Pathology. Is quite conjectural.

Treatment. More relief is obtained by local applications than by medicinal agents.

F I N I S.

R E F E R E N C E S.

I have obtained my information from these sources : -

Bernhardt : - "On a less known neurosis of the extremities, especially of the upper extremities ."
Centralblatt for diseases of the nerves 1886 - P. 33".

Friedmann: - "Acroparaesthesia."
German Magazine for cure of Nerves.

Frankl.-Hochwart : - "Acroparaesthesia."

Nothnagel : - "Specific Pathology and Therapy." 1898.
Vol: 2, Chap. 2.

Laquer : - "On a special form of Paraesthesia of the Extremities."
Neurological Central Magazine for 1893. P. 188.

Oppenheim : - "Students' Book of the Diseases of the Nerves."
2nd. Edition. P. 924.

Pfeiffer : - "Gout Fingers."
The Berlin Clinical Weekly for 1891. P. 369.

Rosenbach : - "Swelling of the End Phalanges of the Fingers,
A Trophic Disturbance not hitherto described."
Published in the'Centralblatt' for the Healing of the Nerves.
V. 13, 1890, P. 199.

Whiting : - "Acroparaesthesia."
The Medical Press and Circular, April 10, 1907.

Cassirer : - "Vasomotor-trophic Neurosis."

Schmidt : - "On Clinical Pathology of the Peripheral Nervous System in cases of Tuberculosis of Lungs, with special respect to Acroparaesthesia."
From Vienna Clinical Weekly.
1899, P. 721.

Schulze : - "On Acroparaesthesia."
The German Magazine for Healing of Nerves.
1892. V. 3. P. 300.